AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1-14 (Canceled).

15. (Currently Amended) ~~A~~The system as recited in claim 16, ~~further comprising:~~ ~~a hub server,~~ wherein said network hub server ~~is capable of communicating with said hub server; and wherein configuration parameters for said network server to communicate with said network device can be propagated between said hub server and said network server bidirectionally~~ further includes means for deriving state information from said at least one network device by polling said at least one network device, receiving a response from said at least one network device, and computing a weighted average over a plurality of time periods using responses received from said at least one network device when said at least one remote network server is inoperable.

16. (Currently Amended) A distributed network management system, comprising:

at least one network hub server ~~capable of~~ for communicating with and monitoring ~~a~~at least one remote network server ~~network device; and~~ ;

said at least one remote network server for communicating with at least one network device and said at least one network hub server; and

means associated with said at least one remote network server for deriving state information from said network device ~~using a paradigm ("LTP") that includes~~ by polling said at least one network device ~~and using responses received~~, receiving a response from said at least one network device ~~to compute~~, and computing a weighted average over a plurality of time periods using responses received from said at least one network device.

17. (Currently Amended) ~~A~~The system as recited in claim 16, wherein said ~~LTP~~ deriving state information comprises:

defining a polling interval for said at least one network device;

sending~~, from an ICMP server,~~ a plurality of pings to an interface address on said at least one network device during said polling interval;

monitoring ~~the~~ a number of pings returned from said at least one network device and ~~converting said number to~~calculating a percentage based on the number of pings sent and said number of pings returned;

sending a~~n SNMP~~ query to said at least one network device and determining operational status of said at least one network device from said ~~SNMP~~ query based on a response from said at least one network device, said operational status comprising "up", "down", and "unknown";

using the calculated percentage of pings returned and ~~the~~ said ~~SNMP~~ status response, generating a status percentage for the polling period by multiplying the percentage pings returned by a constant value associated with said operational status, said constant value comprising a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown"; and

computing a weighted average of the status percentages for current and previous four polling periods and determining the state of ~~the~~ said at least one network device from the weighted average.

18. (Cancelled)

19. (Currently Amended) A computer readable storage medium having a program for generating a source code object, the program comprising logic for executing an LTP paradigm, said LTP paradigm comprising the steps of ~~system as recited in claim 16, further comprising programming associated with said network server for carrying out the functions~~ of:

defining a polling interval for at least one network device;

sending~~, from an ICMP server,~~ a plurality of pings to an interface address on said at least one network device during said polling interval;

monitoring ~~the~~a number of pings returned from said at least one network device and ~~converting said number to~~calculating a percentage based on the number of pings sent and said number of pings returned;

sending a~~n SNMP~~ query to said at least one network device and determining operational status of said at least one network device from said ~~SNMP~~ query based on a response from said at least one network device, said operational status comprising "up", "down", and "unknown";

using the calculated percentage of pings returned and ~~the SNMP~~ said status response, generating a status percentage for the polling period by multiplying the percentage pings returned by a constant value associated with said operational status, said constant value comprising a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown"; and

computing a weighted average of the status percentages for current and previous four polling periods and determining the state of ~~the~~ said at least one network device from the weighted average.

20. (Previously Presented) A system for deriving state information from a network device, comprising:

(a) a computer; and

(b) programming associated with said computer for carrying out the operations of

(i) defining a polling interval;

(ii) sending, from an ICMP server, a plurality of pings to an interface address on said network device during said polling interval;

(iii) monitoring the number of pings returned from said network device and converting said number to a percentage based on the number of pings sent;

(iv) sending an SNMP query to said network device and determining operational status of said network device from said SNMP query, said operational status comprising "up", "down", and "unknown";

(v) using the percentage of pings returned and the SNMP status, generating a status percentage for the polling period by multiplying the percentage pings returned by a constant value associated with said operational status, said constant value comprising a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown"; and

(vi) computing a weighted average of the status percentages for current and previous four polling periods and determining the state of the network device from the weighted average.

21 – 27 (Canceled).

28. (Currently Amended) ~~A~~The method as recited in claim 29, ~~further comprising:~~ wherein said

~~providing a hub~~ at least one network hub server, ~~wherein said network server is capable of communicating with said network~~ device and said hub server; and ~~propagating configuration parameters for said network server to communicate with said network device between said hub server and said network server bidirectionally~~ monitors said remote network server and derives state information from said at least one network device by polling said at least one network device, receiving a response from said at least one network device, and computing a weighted average over a plurality of time periods using responses received from said at least one network device when said remote network server is inoperable.

29. (Currently Amended) A method for distributed network management, comprising:

~~providing a network server capable of~~ communicating, through at least one remote network server, with ~~a~~at least one network device[[;]] and with at least one network hub server, and said at least one remote network server deriving state information from said at least one network device ~~using a paradigm ("LTP") that includes~~ by polling said at least one network device ~~and using responses received~~, receiving a response from said at least one

network device ~~to compute~~, and computing a weighted average over a plurality of time periods using responses received from said at least one network device.

30. (Currently Amended) ~~A~~The method as recited in claim 29, wherein said ~~LTP~~ deriving state information comprises:

defining a polling interval for said at least one network device;

sending~~, from an ICMP server,~~ a plurality of pings to an interface address on each said at least one network device during said polling interval;

monitoring ~~the~~a number of pings returned from said at least one network device and ~~converting said number to~~calculating a percentage based on the number of pings sent and said number returned ;

sending a~~n SNMP~~ query to said at least one network device and determining operational status of said at least one network device from said ~~SNMP~~ query based on a response from said at least one network device, said operational status comprising "up", "down", and "unknown";

using the calculated percentage of pings returned and said ~~the SNMP~~ status response, generating a status percentage for the polling period by multiplying the percentage pings returned by a constant value associated with said operational status, said constant value comprising a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown"; and

computing a weighted average of the status percentages for current and previous four polling periods and determining the state of ~~the~~said at least one network device from the weighted average.

31. (Previously Presented) A method for deriving state information from a network device, comprising:

(a) defining a polling interval;

(b) sending, from an ICMP server, a plurality of pings to an interface address on said network device during said polling interval;

(c) monitoring the number of pings returned from said network device and converting said number to a percentage based on the number of pings sent;

(d) sending an SNMP query to said network device and determining operational status of said network device from said SNMP query, said operational status comprising "up", "down", and "unknown";

(e) using the percentage of pings returned and the SNMP status, generating a status percentage for the polling period by multiplying the percentage pings returned by a constant value associated with said operational status, said constant value comprising a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown"; and

(f) computing a weighted average of the status percentages for current and previous four polling periods and determining the state of the network device from the weighted average.

32. (Currently Amended) ~~A~~The system as recited in claim 16, wherein said ~~LTP~~ deriving state information comprises:

defining a polling interval for said at least one network device;

sending~~, from an ICMP server,~~ a plurality of pings to an interface address on said at least one network device during said polling interval;

monitoring ~~the~~a number of pings returned from said at least one network device and ~~converting said number to~~calculating a percentage based on the number of pings sent and said number of pings returned;

using the calculated percentage of pings returned, generating a status percentage for the polling ~~period~~interval by multiplying the calculated percentage pings returned by a constant value; and

computing a weighted average of the status percentages for a current and a plurality of previous polling periods and determining the state of ~~the~~said at least one network device from the weighted average.

33. (Currently Amended) ~~A~~The system as recited in claim 32, further comprising:

sending an SNMP query to said at least one network device and determining an operational status of said at least one network device from said SNMP query, said operational status comprising "up", "down", and "unknown", wherein said constant value comprises a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown".

34. (Currently Amended) ~~A~~The method as recited in claim 29, wherein said ~~LTP~~ deriving state information comprises:

defining a polling interval for said at least one network device;

sending~~, from an ICMP server,~~ a plurality of pings to an interface address on said at least one network device during said polling interval;

monitoring ~~the~~a number of pings returned from said at least one network device and ~~converting said number to~~calculating a percentage based on the number of pings sent and said number returned;

using the calculated percentage of pings returned, generating a status percentage for the polling ~~period~~interval by multiplying the percentage pings returned by a constant value; and

computing a weighted average of the status percentages for a current and a plurality of previous polling periods and determining the state of ~~the~~said at least one network device from the weighted average.

35. (Currently Amended) ~~A~~ The method as recited in claim 34, further comprising:

sending an SNMP query to said at least one network device and determining an operational status of said at least one network device from said SNMP query, said operational status comprising "up", "down", and "unknown", wherein said constant value comprises a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown."

36. (New) The system as recited in claim 15, wherein said deriving state information comprises:

defining a polling interval for said at least one network device;

sending a plurality of pings to an interface address on said at least one network device during said polling interval;

monitoring a number of pings returned from said at least one network device and calculating a percentage based on the number of pings sent and said number of pings returned;

sending a query to said at least one network device and determining operational status of said at least one network device from said query based on a response from said at least one network device, said operational status comprising "up", "down", and "unknown";

using the calculated percentage of pings returned and said status response, generating a status percentage for the polling period by multiplying the percentage pings returned by a constant value associated with said operational status, said constant value comprising a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown"; and

computing a weighted average of the status percentages for current and previous four polling periods and determining the state of said at least one network device from the weighted average.

37. (New) The system as recited in claim 15, wherein said deriving state information comprises:

defining a polling interval for said at least one network device;

sending a plurality of pings to an interface address on said at least one network device during said polling interval;

monitoring a number of pings returned from said at least one network device and calculating a percentage based on the number of pings sent and said number of pings returned;

using the calculated percentage of pings returned, generating a status percentage for the polling interval by multiplying the calculated percentage pings returned by a constant value; and

computing a weighted average of the status percentages for a current and a plurality of previous polling periods and determining the state of said at least one network device from the weighted average.

38. (New) The system as recited in claim 37, further comprising:

sending an SNMP query to said at least one network device and determining an operational status of said at least one network device from said SNMP query, said operational status comprising "up", "down", and "unknown", wherein said constant value comprises a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown".

39. (New) The method as recited in claim 28, wherein said deriving state information comprises:

defining a polling interval for at least one network device;

sending a plurality of pings to an interface address on said at least one network device during said polling interval;

monitoring a number of pings returned from said at least one network device and converting said number to a percentage based on the number of pings sent and said number of pings returned;

sending a query to said at least one network device and determining operational status of said at least one network device from said query, said operational status comprising "up", "down", and "unknown";

using the percentage of pings returned and the status, generating a status percentage for the polling period by multiplying the percentage pings returned by a constant value associated with said operational status, said constant value comprising a first value if the

operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown"; and

computing a weighted average of the status percentages for current and previous four polling periods and determining the state of said at least one network device from the weighted average.

40. (New) The method as recited in claim 28, wherein said deriving state information comprises:

defining a polling interval for each said at least one network device;

sending a plurality of pings to an interface address on each said at least one network device during said polling interval;

monitoring a number of pings returned from said at least one network device and calculating a percentage based on the number of pings sent and said number of pings returned;

using the calculated percentage of pings returned, generating a status percentage for the polling interval by multiplying the percentage pings returned by a constant value; and

computing a weighted average of the status percentages for a current and a plurality of previous polling periods and determining the state of said at least one network device from the weighted average.

41. (New) A method as recited in claim 40, further comprising:

sending an SNMP query to said at least one network device and determining an operational status of said network device from said SNMP query, said operational status comprising "up", "down", and "unknown" wherein said constant value comprises a first value if the operational status is "up", a second value if the operational status is "down", and a third value if the operational status is "unknown."